APA628Hu01 100μg
Active Nitric Oxide Synthase Trafficker (NOSTRIN)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Lys18~Ala251
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .
Original Concentration: 200μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 9.5
Predicted Molecular Mass: 30.7kDa
Accurate Molecular Mass: 33kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8ºC for one month.
Aliquot and store at -80ºC for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

KEF SQNGENFCKQ VTSVLQQRAN LEISYAKGLQ
KLASKLSKAL QNTRKSCVSS AWAWASEGMK STADLHQKLG KAIELEAIKP
TYQVLNVQEK KRKSLDNEVE KTANLVISNW NQQIKAKKKL MVSTKKHEAL
FQLVESSKQS MTEKEKRKLL NKLTKSTEKL EKEDENYYQK NMAGYSTRLK
WENTLENCYQ SILELEKERI QLLCNNLNQY SQHISLFGQT LTTCHTQIHC
A

[ACTIVITY]

Nitric Oxide Synthase Trafficker (NOSTRIN) is a scaffolding protein that regulates the subcellular localization and activity of endothelial nitric oxide synthase (eNOS), a key enzyme in vascular nitric oxide (NO) production. NOSTRIN facilitates eNOS trafficking to caveolae, specialized membrane microdomains, where it modulates NO signaling. Dysregulation of NOSTRIN has been linked to vascular disorders, including preeclampsia, where its overexpression correlates with reduced eNOS activity and impaired vasodilation. NOSTRIN interacts with Caveolin 1 (CAV1), a structural protein of caveolae, through direct binding, influencing eNOS sequestration and NO bioavailability.To detect the activity of recombinant NOSTRIN, a functional ELISA assay was performed to evaluate the interaction between recombinant human NOSTRIN and recombinant human CAV1.Briefly, NOSTRIN was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to CAV1-coated microtiter wells and incubated for 1h at 37 ℃. Wells were washed with PBST and incubated for 1h with anti-NOSTRIN pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes

at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant rat NOSTRIN and recombinant human CAV1 was shown in Figure 1, the EC50 for this effect is 46.38μg/mL.

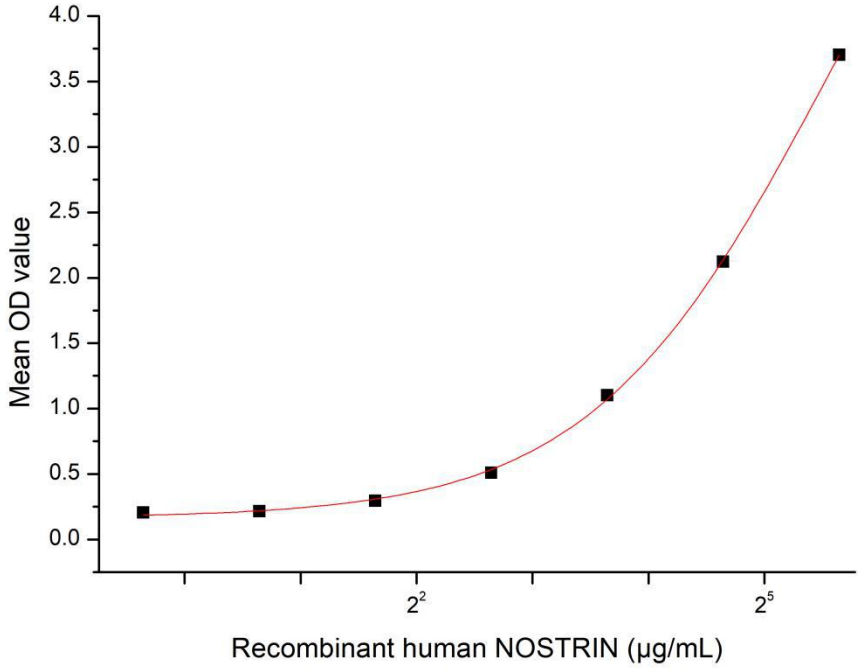

Figure 1. The binding activity of recombinant human NOSTRIN and human CAV1

[IDENTIFICATION]

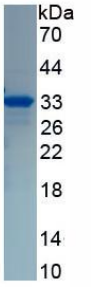

Figure 2. SDS-PAGE

Sample: Active recombinant NOSTRIN, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.